

# KILEY FEICKERT

Registered Architect, MA  
PhD Candidate, Building Technology  
CPO, Forma Systems

feickert@mit.edu

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## EDUCATION

2022 - 2025

expected

### Massachusetts Institute of Technology

PhD Candidate, Architecture; Building Technology  
Department of Architecture, Cambridge, MA, USA

Thesis: *Towards an embodied carbon moonshot: Evaluating the reduction potential of design across scales*. Advised by Professor Caitlin Mueller

2020 - 2022

### Massachusetts Institute of Technology

Master of Science in Architecture Studies, Architecture; Building Technology  
Department of Architecture, Cambridge, MA, USA

Thesis: *Thin shell foundations: Embodied carbon reduction through materially efficient geometry*. Advised by Professor Caitlin Mueller

2008 - 2013

### California Polytechnic State University

Bachelor of Architecture, Magna Cum Laude

Department of Architecture, San Luis Obispo, CA, USA

Thesis: *The migrators depository*. Advised by Professor Karen Lange

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## PROFESSIONAL EXPERIENCE

2023 - current

### Forma Systems

Chief Product Officer (CPO)

2020 - current

### Registered Architect

Commonwealth of Massachusetts, USA

2022

### Client Representative: MIT SA+P Department of Architecture

Center for Climate Solutions on Governor's Island Request for Proposals

Center of New York and the Trust for Governor's Island

2016 - 2019

### BIG | Bjarke Ingels Group

London, UK

Google Kings Cross, 90,000 m<sup>2</sup>, London, UK, Designer

Structure packages lead: Responsible for the design development of structural steelwork, cross-laminated timber and precast concrete floors packages.

2013 - 2016

New York, USA

Google Charleston East, 600,000 ft<sup>2</sup>, Mountain View, USA, Designer

Envelope team: Contributed to the development of the fully integrated photovoltaic canopy.

Prototypes + R&D lead: Led coordination of detailed design drawings. Supervised and assisted in the construction of mock-ups.

Google Campus, 3,500,000 ft<sup>2</sup>, Mountain View, USA, Junior Designer

Envelope team: Developed performance-driven structural skin that prioritizes transparency while utilizing photovoltaics and modular shading devices located within the envelope cavity.

Prototypes + R&D lead: Prototyped bespoke modular shading devices from desk studies to full-scale mock-ups. Led coordination of detailed design drawings. Supervised and assisted in the construction of mock-ups.

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## TEACHING EXPERIENCE

fall 2023

### Co-Instructor

4.463 Building Technology Systems: Structures and Envelopes (MArch Core)  
Massachusetts Institute of Technology, Department of Architecture  
Kiley Feickert and Eduardo Gascón Alvarez

#### Course Evaluations - Overall Ratings:

Quality of Teaching - Lecture: 7.0/7.0

Quality of Teaching - Lab: 7.0/7.0

Overall Rating of the Subject: 6.7/7.0

Spring 2024

### Teaching Assistant

4.441 Carbon Reduction Pathways for the MIT Campus  
Massachusetts Institute of Technology, Department of Architecture  
Professor Christoph Reinhart

fall 2021

### Teaching Assistant

4.411 D-Lab Schools: Building Technology Laboratory  
Massachusetts Institute of Technology, Department of Architecture  
Professor Leslie Norford

fall 2020

### Teaching Assistant

4.463 Building Technology Systems: Structures and Envelopes (MArch Core)  
Massachusetts Institute of Technology, Department of Architecture  
Professor Caitlin Mueller

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## RESEARCH EXPERIENCE

2020 - present

### Research Assistant

Massachusetts Institute of Technology  
Digital Structures Research Group, Building Technology Lab  
Led by Professor Caitlin Mueller

#### Whole Building Embodied Carbon Analysis

Studying the interrelated impacts of building design and structural mechanics to reduce overall material demand and carbon emissions embodied in buildings.

#### Policy

Investigating effective environmental policy measures across sectors with a focus on reducing embodied carbon emissions in the building sector.

#### Low-cost, Low-carbon Housing

Utilizing efficient geometry and local materials to reduce the cost and carbon emissions for affordable housing through algorithmic investigation and prototype deployment.

#### Adaptive Reuse and Structural System Utility

Studying the impact of occupancy, materiality and efficient structural design on the ability to meet floor area demands of population growth, reusing existing foundations to reduce building GWP.

2022

### LCAU Digital Urbanism Seed Grant

Massachusetts Institute of Technology  
Norman B. Leventhal Center for Advanced Urbanism  
Professor Caitlin Mueller and Kiley Feickert  
*Finding our footing: Data-driven assessment of low-carbon building foundations at the urban scale.*

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## PUBLICATIONS PEER REVIEWED

- |      |   |
|------|---|
| 2024 | <b>Feickert K, + Mueller CT.</b><br>“Policy and design levers for minimizing embodied carbon in United States buildings: A quantitative comparison of current and proposed strategies,” <i>J. Build. Environ.</i> <a href="#">Link</a>  |
| 2024 | Curth A, Gascón Alvarez E, <b>Feickert K</b> , Martínez Schulte D, Mueller CT, + Ismail MA.<br>“Sueños Con Tierra/Concreto: Multi-material fabrication for low-carbon construction, an optimized floor system for affordable housing in Mexico,” in <i>Fabricate 2024: Creating Resourceful Futures.</i> <a href="#">Link</a> |
| 2023 | <b>Feickert K, + Mueller CT.</b><br>“Thin shell foundations: Quantification of embodied carbon reduction through materially efficient geometry,” <i>J. Archit. Struct. Constr.</i> <a href="#">Link</a>   |
| 2023 | <b>Feickert K, + Mueller CT.</b><br>“Algorithmic investigation of structural system utility for urban development reusing existing foundations,” in <i>proceedings of IASS Annual Symposium 2023: Integration of Design and Fabrication.</i> <a href="#">Link</a>   |
| 2023 | Gascón Alvarez E, <b>Feickert K</b> , Ismail MA, Mueller CT, + Norford LK.<br>“Integrated urban heat sinks for low-carbon neighbourhoods: Dissipating heat to the ground and sky through building structures,” <i>J. Build. Perform. Simul.</i> <a href="#">Link</a>  |
| 2023 | Gascón Alvarez E, Curth A, <b>Feickert K</b> , Martínez Schulte D, Mueller CT, + Ismail MA.<br>“Algorithmic design for low-carbon, low-cost housing construction in Mexico,” in <i>proceedings of ACADIA Annual Conference 2023: Habits of the Anthropocene.</i> <a href="#">Link</a>   |
| 2021 | <b>Feickert K, + Mueller CT.</b><br>“Thin shell foundations: Historical review and future opportunities,” in <i>proceedings of IASS Annual Symposium 2020/21: Inspiring the Next Generation.</i> <a href="#">Link</a>   |

## PUBLICATIONS OTHERS

- |             |  |
|-------------|--|
| 2024        | <b>Sueños con Fibra/Madera, Tierra/Concreto</b><br>Mexican Architectures: 2021-2022: The Best of the 21st Century. Arquine.<br>Featured project  |
| 2023        | <b>Considerations for Local Government Capacity Building in Arkansas</b><br>White paper to Dr. Chris Jones and Arkansas Black Mayors’ Association<br>11.s943 Bills and Billions, Prof. Elisabeth B. Reynolds + Prof. J. Phillip Thompson   |
| 2023        | <b>Review of Provisions in Federal Procurement Contracts Involving the Use of Low Embodied Carbon Materials and Systems</b><br>Policy memo to Michael Regan, Administrator of the Environmental Protection Agency<br>11.s943 Bills and Billions, Prof. Elisabeth B. Reynolds + Prof. J. Phillip Thompson |
| 2021        | <b>Nigerian Campus Architecture: A. A. Egbor and Select Collaborators</b><br>Imprint 02<br>MIT Department of Architecture Publication  |
| 2009 - 2012 | <b>Second, Third, and Fourth Year Projects</b><br>CAED Architecture + Design + Discourse XI, XII, XIII<br>Cal Poly San Luis Obispo Architecture Department Publication   |

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## AWARDS + RECOGNITION

2024 - 2025	<b>Martin Family Fellow for Sustainability</b> Massachusetts Institute of Technology
2022 - 2023	<b>MIT Presidential Fellow</b> Massachusetts Institute of Technology
2023	<b>ArchDaily Building of the Year Nominee: Sueños con Fiber/Timber, Earth/Concrete</b> ArchDaily Small Scale + Installation Award Category, Mexico City, Mexico
2022	<b>Master of Science in Architecture Studies Prize for Thesis</b> Massachusetts Institute of Technology, Department of Architecture
2021	<b>Norman Foster Foundation Workshop Scholarship: Re-Materializing Housing</b> Norman Foster Foundation, Madrid, Spain
2023	<b>Graduate Student Council Conference Grant Recipient</b> Massachusetts Institute of Technology
2021, 2023	<b>Avalon Conference Travel Grant Recipient</b> Massachusetts Institute of Technology, Department of Architecture
2012	<b>Larry H. Loh Architecture Design Excellence Scholarship Nominee</b> California Polytechnic State University, San Luis Obispo, Department of Architecture
2012	<b>Robert Hifumi Odo Scholarship Nominee</b> California Polytechnic State University, San Luis Obispo, Department of Architecture
2011	<b>Henri deHahn Third Year Award Nominee</b> California Polytechnic State University, San Luis Obispo, Department of Architecture
2010	<b>Henri deHahn Second Year Award Runner-Up</b> California Polytechnic State University, San Luis Obispo, Department of Architecture

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## LEADERSHIP + OUTREACH

2024 - 2025 2023 - 2024	<b>MIT Department of Architecture, Architecture + Urbanism and Building Technology Faculty Search Committee Member</b> Massachusetts Institute of Technology
2022 - current	<b>Cabinet Member, Department of Architecture Student Council; Building Technology</b> Massachusetts Institute of Technology
2020 - 2022, 2024	<b>Application Mentorship Program, MIT Department of Architecture</b> Massachusetts Institute of Technology
2024	<b>MIT Visiting Committee Discussion Lead; PhD Students</b> Massachusetts Institute of Technology
2022	<b>MIT Visiting Committee Discussion Participant; SMArchS Students</b> Massachusetts Institute of Technology
2022	<b>I am a LEADer (Learning Equity And Diversity) Conference Badge Recipient</b> Massachusetts Institute of Technology
2021	<b>Courageous Conversation Seminar Participant</b> Massachusetts Institute of Technology

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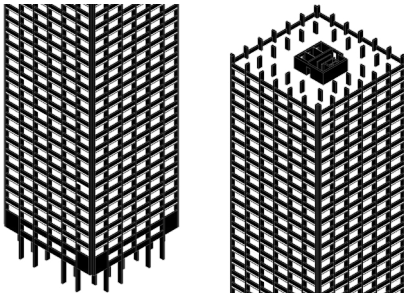
## INVITED CRITIC + LECTURES

Oct 2024	<b>MArch Thesis Mid Review: R. Ghosn</b> Massachusetts Institute of Technology, Department of Architecture
Oct 2024	<b>SMArchS Colloquium Presentation: S. Tibbits</b> Massachusetts Institute of Technology, Department of Architecture
Oct 2024	<b>Building Technology Systems: Structures and Envelopes Lecture: C. Mueller</b> Massachusetts Institute of Technology, Department of Architecture
May 2024	<b>SMArchS + SMBT Thesis Review: A. Miljacki</b> Massachusetts Institute of Technology, Department of Architecture
May 2024	<b>Parallel Play Final Review - Option Studio: K. Yao + A. Yarinsky</b> Massachusetts Institute of Technology, Department of Architecture
Mar 2024	<b>Parallel Play Mid Review - Option Studio: K. Yao + A. Yarinsky</b> Massachusetts Institute of Technology, Department of Architecture
Mar 2023	<b>MArch Thesis Preparation Mid Review: R. Shieh</b> Massachusetts Institute of Technology, Department of Architecture
Mar 2023	<b>Architecture Studio 3 Site Design Mid Review: C. Bayley</b> Boston Architectural College
Dec 2023	<b>Forming Feasts Final Review - Arch Design Studio I: L. Alkhayat</b> Massachusetts Institute of Technology, Department of Architecture
Nov 2023	<b>Architecture Design Core Studio III Review: Y. Daniels</b> Massachusetts Institute of Technology, Department of Architecture
Oct 2023	<b>Architecture Design Core Studio III Review: Y. Daniels</b> Massachusetts Institute of Technology, Department of Architecture
May 2023	<b>Materials Final Review: J. Grinham</b> Harvard Graduate School of Design
Apr 2023	<b>Architectural Assemblies Review: A. Modesitt</b> Massachusetts Institute of Technology, Department of Architecture
Nov 2022	<b>SMArchS Colloquium Presentation: S. Tibbits</b> Massachusetts Institute of Technology, Department of Architecture
Nov 2022	<b>Ghost House 3/4 Review - Option Studio: B. Clifford</b> Massachusetts Institute of Technology, Department of Architecture
Sept 2022	<b>Ghost House 1/4 Review - Option Studio: B. Clifford</b> Massachusetts Institute of Technology, Department of Architecture
Oct 2021	<b>Architecture Design Core Studio III Review: S. Kennedy</b> Massachusetts Institute of Technology, Department of Architecture
Oct 2021	<b>Building Technology Systems: Structures and Envelopes Lecture: C. Mueller</b> Massachusetts Institute of Technology, Department of Architecture
Oct 2021	<b>SMArchS Colloquium Presentation: S. Tibbits</b> Massachusetts Institute of Technology, Department of Architecture

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## SELECTED PROJECTS

PERSONAL



PROFESSIONAL



### SUEÑOS CON TIERRA/CONCRETO: MEXTRÓPOLI 2023

**PROGRAM** Pavilion  
**STAGES INVOLVED** Design - Construction  
**COLLABORATORS** Edu Gascón Alvarez, Mohamed Ismail, Sandy Curth, Caitlin Mueller, Leslie Norford, Dinorah Martínez Schulte, Manufactura, Anfora Studio, Formas de Fibra de Vidrio, Échale, New Story  
**STATUS** Completed  
**CLIENT** Grupo Mota-Engil, MIT Leventhal Center of Advanced Urbanism  
**PRESS** [Architect](#), [designboom](#), [ArchDaily](#).  
**AWARDS** [Nominee, ArchDaily Building of the Year 2023: Small Scale + Installations](#)

### MAKE/SHIFT: ALGORITHMIC DESIGN FOR A CIRCULAR MATERIAL FUTURE

**PROGRAM** Material reuse competition entry  
**STAGES INVOLVED** Design  
**COLLABORATORS** Juliana Berglund-Brown, Inge Donovan, Keith J. Lee, Caitlin Mueller, Jenna Schnitzler  
**CLIENT** Eventscape  
**AWARDS** Shortlisted

### EASTGATE TOWER REUSE: NORMAN FOSTER FOUNDATION, RE-MATERIALIZING HOUSING

**PROGRAM** Residential: Multi-family  
**STAGES INVOLVED** Design  
**COLLABORATORS** Nicolas Ayoub, Aarti Dhingra, Claudia Eugenin  
**STATUS** Speculative proposal

### GOOGLE KINGS CROSS

**PROGRAM** Headquarters office  
**STAGES INVOLVED** Architectural design - Construction Administration  
**COLLABORATORS** BIG, Heatherwick Studios, BDP, Gardiner & Theobald, AKT II, Atelier Ten, Olsson Fire & Risk, Sandy Brown, Sweco, Arup, Gillespies, Mott Macdonald, Eckersley O'Callaghan, ACD, Charcoal Blue, SHW, Reef, Sturgis Carbon Profiling, Devin, RWDI, Bim Technologies  
**SIZE/LOCATION** 80,819 m<sup>2</sup> / Kings Cross, London, UK  
**STATUS** Under Construction  
**CLIENT** Google UK Limited, Argent Services LLP

### GOOGLE CHARLESTON EAST

**PROGRAM** Headquarters office  
**STAGES INVOLVED** Architectural design  
**COLLABORATORS** BIG, Heatherwick Studios, Adamson, Arup, CCI, EWCG, FMS, Mott Macdonald, Hathaway Dinwiddie, HJLA, HLW, Hortscience, H.T. Harvey & Associates, Integral, Iris Environmental, JLL, Kleinfelder, Loisos + Ubbelohde, Sera, Sherwood, Vital  
**SIZE/LOCATION** 600,000 ft<sup>2</sup> / Mountain View, CA, USA  
**STATUS** Under Construction  
**CLIENT** Google